REMARKS

[0003] Applicant respectfully requests entry of the following remarks and reconsideration of the subject application. Applicant respectfully requests entry of the amendments herein. The remarks and amendments should be entered under 37 C.F.R. §1.116 as they place the application in better form for appeal, or for resolution on the merits.

[0004] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-41 are presently pending. Claims amended herein are: 1, 5, 11, 18, 19, 24, 26, 31, 36 and 41. Claims withdrawn or cancelled herein are: none. New claims added herein are: none.

Statement of Substance of Interview

[0005] The Examiner graciously talked with me—the undersigned representative for the Applicant—on January 29, 2008. Applicant greatly appreciates the Examiner's willingness to talk. Such willingness is invaluable to both of us in our common goal of an expedited prosecution of this patent application.

[0006] During the interview, I discussed how the claims differed from the cited art, namely Chiang and Roberts. Without conceding the propriety of the rejections and in the interest of expediting prosecution, I also proposed several possible clarifying amendments.

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[0007]   I understood the Examiner to tentatively agree that independent claims 1, 5, 11, 18, 19, 24, 26, 31, 36 and 41 would be patentable over the cited art if amended as discussed during the interview.

[0008]   Applicant herein amends the claims in the manner discussed during the interview. Accordingly, Applicant submits that the pending claims are allowable over the cited art of record for at least the reasons discussed during the interview.

Formal Request for an Interview

[0009]   If the Examiner's reply to this communication is anything other than allowance of all pending claims, then I formally request an interview with the Examiner. I encourage the Examiner to call me—the undersigned representative for the Applicant—so that we can talk about this matter so as to resolve any outstanding issues quickly and efficiently over the phone.

[0010]   Please contact me or my assistant to schedule a date and time for a telephone interview that is most convenient for both of us. While email works great for us, I welcome your call to either of us as well. Our contact information may be found on the last page of this response.

Claim Amendments

[0011]   Without conceding the propriety of the rejections herein and in the interest of expediting prosecution, Applicant amends claims 1, 5, 11, 18, 19, 24, 26, 31, 36 and 41 herein. Applicant amends claims to clarify claimed features. Such amendments are made to expedite prosecution and more quickly identify allowable subject matter. Such amendments are merely intended to clarify the

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claimed features, and should not be construed as further limiting the claimed invention in response to cited art.

[0012]   These claim amendments are fully supported by Application and therefore do not constitute new matter.   Please see page 15 of the specification, which incorporates application 09/598,105 by reference.   Furthermore, please see pages 4-6 of the specification filed in application 09/598,105.

Substantive Matters

Claim Rejections under § 103

[0013]   Claims 1-41 are rejected under 35 U.S.C. § 103.   In light of the amendments presented herein and the agreements reached during the above-discussed Examiner interview, Applicant submits that these rejections are moot. Accordingly, Applicant asks the Examiner to withdraw these rejections.

[0014]   The Examiner's rejections are based upon the following references in combination:

- **Chiang:** *Chiang,* US Patent Application Publication No. 2006/0294500 (filed August 29, 2006 as a continuation of a parent application filed on March 16, 2001);

- **Roberts:** *Roberts et al.,* US Patent No. 6,792,605 (issued September 14, 2004); and

- **Firth:** *Firth et al.,* US Patent No 5,987,517 (issued November 16, 1999).

Overview of the Application

[0015] The Application describes an application program interface (API) that provides a set of functions for application developers who build Web applications on Microsoft Corporation's .NET platform. A common language runtime layer allows seamless multi-language development of the web applications, with cross language inheritance, and provides a robust and secure execution environment for the multiple programming languages.

Cited References

[0016] The Examiner cites Chiang as the primary reference, and Roberts and Firth as the secondary references in the obviousness-based rejections.

Chiang

[0017] Chiang describes providing a web application to generate the basis for a complete web application source code. Based on user interface input files provided by graphic designers, the web application generates application framework code, an event handler skeleton and a logic foundation code. Web developers then prepare additional source object-oriented programming language based on the event handler skeleton and business logic foundation code to create web application business logic objects and handler methods.

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Roberts

[0018]   Roberts describes incorporating services and applications from a number of sources into a customized application. The invention accomplishes this through an entity referred to as a web service. The web services architecture maintains a directory of services available to provide processing or services, along with the location of the services and the input/output schemas required by the services. When a request for data or services is received, appropriate services are invoked by a web services engine using service drivers associated with each service.

Firth

[0019]   Firth describes a library of reentrant networking functions organized with file system semantics allowing a client application on a client computer connected to a computer network to establish communications and exchange information with a computer server application on a server network computer.

Obviousness Rejections

Based upon Chiang and Roberts

[0020]   The Examiner rejects claims 1-8, 10-16, 19-22, 24-29, 31-34 and 36-39 under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Roberts. Applicant respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

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Independent Claim 1

[0021] The Examiner indicates (Action, p. 2-3) the following with regard to this claim:

4. As to claim 1, Chiang teaches a software architecture implemented at least in part by a computing device for a distributed computing system comprising: a plurality of applications configured to handle requests submitted by remote devices over a network (Web Application 400 page 3 paragraphs 0033, "...input files..." page 3 paragraphs 0035/0036, Input 605 page 4 paragraph 0039); an application program interface to present functions used by the plurality of applications to access network and computing resources of the distributed computing system (Application Framework 410 page 3 paragraph 0033); and a common language runtime layer that translates the plurality of applications written in different languages into an intermediate language (Web

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Application Source Code Output 610) that is supported by the common runtime layer and configured to access resources or services requested by the remote devices whereby a seamless and robust integration between multi-language application development is allowed (Web Application Generator 205 page 4 paragraphs 0039 – 0044, page 5 paragraph 0050, page 6 paragraphs 0064, page 7 paragraphs 0068/0069).

Chiang is silent with reference to providing secure execution environment for multiple programming languages is provided.

Roberts teaches providing secure execution environment for multiple programming languages is provided ("...access control..." Col. 4 Ln. 36 – 38, Col. 6 Ln. 1 – 9, Ln. 47 – 63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Chiang with the teaching of Roberts because the teaching of Roberts would improve the system of Chiang by providing the essential services of *identification and authentication (I&A)*, *authorization*, and *accountability* where identification and authentication determine who can log on to a system, and the association of users with the software subjects that they are able to control as a result of logging in; authorization determines what a subject can do and accountability identifies what a subject (or all subjects associated with a user) did.

[0022]   Applicant submits that the combination of Chiang and Roberts does not teach at least the following elements as recited in this claim, as amended (with emphasis added):

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- "*a common language runtime* layer that translates the plurality of applications *written in different languages* into an intermediate language,

    the intermediate language being:

    executed natively by the common runtime layer,"

- "configured to access resources or services requested by the remote devices, whereby a seamless integration between *multi-language application development* is allowed and a robust and secure execution environment for multiple **programming languages** is provided."

[0023]   In this Action, the Examiner equates multi-language application development, as recited in the claims, to input files that can be formatted in any "**mark-up** language" as disclosed in Chiang Para [0038-0040].   The multiple mark-up languages as recited in Chiang are not equivalent to the "**programming** languages" as recited in claim 1.

[0024]   As seen in Fig 6 of Chiang and discussed in Para [0039-0040], a web application generator reads a set of web application screens as the input and generates web application source code as the output.   The input files include tags corresponding to a mark-up language, and the same output code is generated regardless of the format of the input files, because the input tags are interpreted in the same fashion for the different languages (e.g. XML, HTML, etc.)

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[0025] However, Chiang does not disclose "a common language runtime layer that translates the plurality of applications written in different languages into an intermediate language, the intermediate language being: executed natively by the common runtime layer" or "multi-language application development" as recited in claim 1.

[0026] In contrast, Chiang discloses that computer programmers use only a single programming language, such as the Java language, to write the underlying function of the web application. (Chiang Para [0026]) Furthermore, the web application source code output is generated as a corresponding Java class. (Chiang Para [0049]) This disclosure does not address the claimed element specifying multi-language application development and an intermediate language being executed natively by the common runtime layer as recited in claim 1.

[0027] Furthermore, the Roberts reference does not account for the deficiencies as explained with respect to Chiang.

[0028] Additionally, independent claims 5, 11, 19, 24, 26, 31 and 36 recite at least one claimed feature not taught by the combination of Roberts and Chiang as explained above.

[0029] As shown above, the combination of Chiang and Roberts does not teach all of the claimed elements and features of these claims. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

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Independent Claims 5, 19 and 31

[0030]   In addition to the explanation given above regarding claim 1, with respect to these claims, applicant submits that the combination of Chiang and Roberts also does not teach at least the following elements as recited in these claims as amended (with emphasis added):

- "wherein the seamless integration **allows for the ability to use a particular code module written in a first language with a code module written in a second language.**"

[0031]   As shown above, the combination of Chiang and Roberts does not teach multi-language application development as recited in these claims. As a result, the cited references do not teach the "ability to use a particular code module written in a first language with a code module written in a second language" as recited in independent claims 5, 19 and 31. Accordingly, Applicant asks the Examiner to withdraw the rejection of these claims.

Independent Claims 24 and 36

[0032]   In addition to the explanation given above with respect to these claims, applicant submits that the combination of Chiang and Roberts also does not teach at least the following elements as recited in these claims as amended (with emphasis added):

- "a common language runtime layer that allows seamless multi-language development, **with cross language inheritance** and

translates the one or more software programs ***written in different languages into an intermediate language***, wherein the intermediate language ***is executed natively by the common language runtime layer*** and is configured to access to the services requested by the one or more software programs."

[0033]   As shown above, the combination of Chiang and Roberts does not disclose multi-language application development as recited in these claims. As a result, the cited references do not disclose the "cross language inheritance" as recited in independent claims 24 and 36. Accordingly, Applicant asks the Examiner to withdraw the rejection of these claims.

Dependent Claims 2-4, 6-8, 10, 12-16, 20-22, 25, 27-29, 32-34 and 37-39

[0034]   These claims each ultimately depend upon one of independent claims 1, 5, 11, 19, 24, 31 or 36. As discussed above, claims 1, 5, 11, 19, 24, 26, 31 and 36 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Based upon Chiang, Roberts and Firth

[0035]   The Examiner rejects claims 9, 17-18, 23, 30, 35 and 40-41 under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Roberts, and further in view of Firth.

[0036]   Independent Claims 18 and 41 include at least one claimed element as explained above. Furthermore, Firth fails to account for the deficiencies as specified in the combination of Chiang and Roberts. As a result, independent claims 18 and 41 are allowable for at least similar reasons as those explained above.

Dependent Claims 9, 17, 23, 30, 35 and 40

[0037]   These claims each ultimately depend upon one of independent claims 5, 11, 19, 26, 31 or 36. As discussed above, claims 5, 11, 19, 26, 31 and 36 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Dependent Claims

[0038]   In addition to its own merits, each dependent claim is allowable for the same reasons that its base claim is allowable. Applicant requests that the Examiner withdraw the rejection of each dependent claim where its base claim is allowable.

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Conclusion

[0039] All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call/email me or my assistant at your convenience.

Respectfully Submitted,

Lee & Hayes, PLLC
Attorneys for Applicant

/Jacob Rohwer, 61,229/   Dated: March 26, 2008

Jacob Rohwer (jacob@leehayes.com; 509-868-8323)
Registration No. 61,229

Bea Koempel-Thomas (bea@leehayes.com; x259)
Registration No. 58,213

Assistant: Megan Arnold (megan@leehayes.com; x270)
Customer No. **22801**

Telephone: (509) 324-9256
Facsimile: (509) 323-8979
www.leehayes.com

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